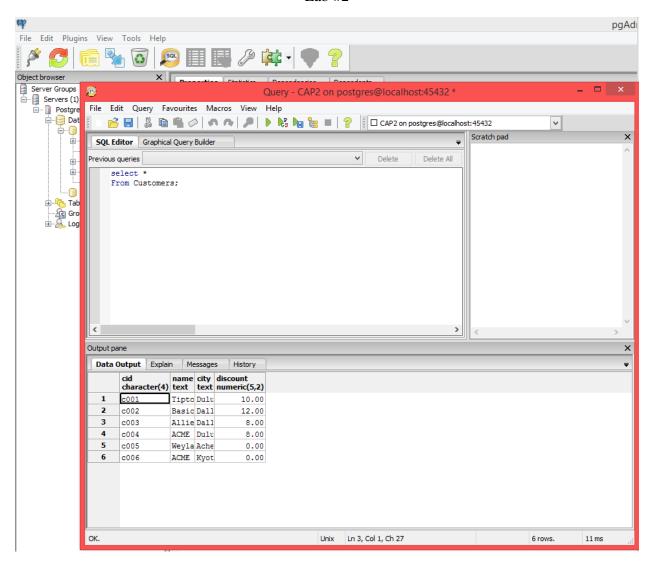
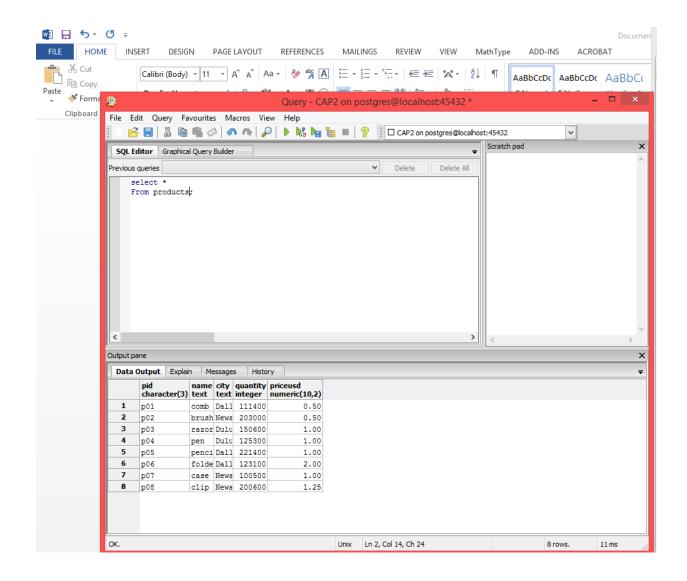
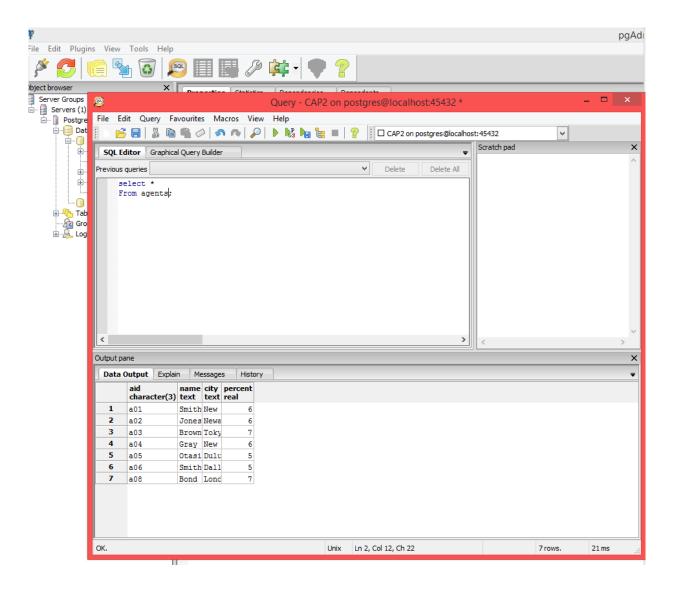
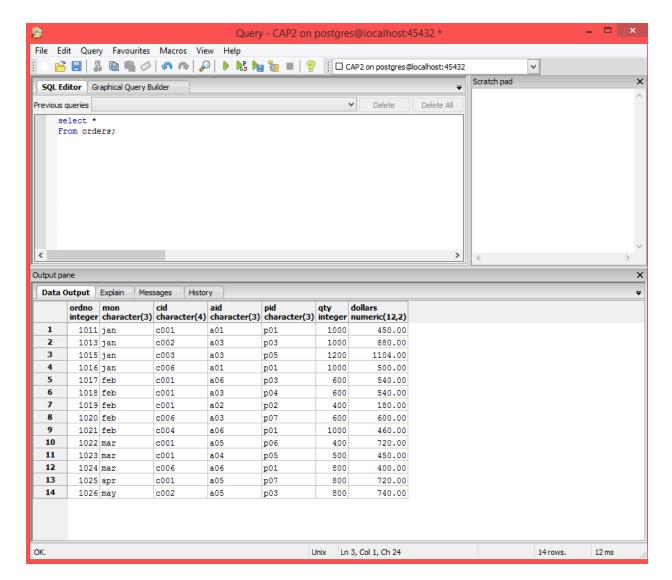
Tom Gonzalez CMPT 308 Professor Labouseur February 2015

Lab #2









Primary Key – A unique identifier for rows in a table, most tables should have a primary key and each table can have only one primary key. A column or combination of columns that uniquely identify a record. Only one candidate key can be a primary key.

Candidate Key – any column or a combination of columns that can qualify as unique key in database. There can be multiple candidate keys in one table. <u>Each candidate key can qualify as a primary key.</u>

Super Key - A combination of attributes that can be uniquely used to identify a database record. A table may have multiple super keys, <u>candidate keys are a special kind of super key</u>.

Short Essay: Data Types

In SQL there are many data types which are used to define the kind of data that will be stored in a table column. Data types help SQL determine how it will interact with stored data. The general data types in SQL include CHARACTER, VARCHAR, BINARY, BOOLEAN, VARBINARY, INTEGER< SMALLINT, BIGINT, DECIMAL, NUMERIC, FLOAT, REAL,, DOUBLE PRECISION, DATE<, TIME, TIMESTAMP, INTERVAL, ARRAY, MULTISET, and XML. When using these, you may want to create a table for a customer contact information. In such a table it would be best to have the following columns: Customer ID, First Name, Last Name, Email Address, Phone Number, and Mailing Address. For each of these columns the corresponding data types are as follows: CHARACTER, VARCHAR, VARCHAR, VARCHAR, CHARACTER, and VARCHAR. Of these Email Address, Phone Number or Mailing Address could be NULL if a customer decided not to forfeit this information.

Relational Rules

The "First Normal Form" Rule – Data items must be defined and data groups must not repeat. This means that in any given table any entry in a column must contain only one value. To give an example, product ID (pid) cannot be entered as "p01, p02", it must be either "p01" or "p02". This makes a more sense if you think about qualities of a product such as color, you cannot enter "red, blue" for color you must enter either "red", or "blue". Now as for the aspect of non-repetition, a table cannot repeat attributes, this means if you're trying to record data about books and authors you cannot have multiple columns for the authors, you must make a separate table.

The "Access Rows by Content Only" Rule – Can't ask for the location of content, rather one mask ask for the content. IE: Can't say "give me the third row down on the Orders table". This is important as it allows the position of data in the database to shift as needed, and to be accessed more accurately.

The "All Rows Must be Unique" Rule – Two rows cannot contain entirely identical values at one time. This means for a row in a table called "products" you cannot have two rows of a product with the exact same attributes, you cannot have two rows containing "p01, Comb, Austin, 2.00". If you do you cannot accurately access data as this creates ambiguity which cannot be resolved.